



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

Date: 8/26/2010
Subject: Review of Region 5 Data for R06 Deep H2O Horizon
From: David Schroeder *DS*
Region 5 Chicago Regional Laboratory
To: Region 6, US EPA
10625 Fallstone Road
Houston, TX 77099

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-7444 for any comments or questions.

Attached are Results for: R06 Deep H2O Horizon

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

RAM-DOSS



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deep H2O Horizon
Project Number: T0001-100405-20100821-007
Project Manager: Kristie Warr

Reported:
Aug-26-10 16:41

ANALYSIS CASE NARRATIVE Analyst: David Schroeder (312) 353-3100

General Information

Seven subsurface samples were received by the Chicago Regional Laboratory (CRL) for dioctyl sulfosuccinate (DOSS) analysis August 24, 2010. Duplicate, matrix spike and matrix spike duplicate analysis were performed on T001-0059-100822-SW-30-1 and T001-0061-100821-SW-07-1. The samples were received at or less than 6°C.

Sample Analysis and Results

Analysis of dioctyl sulfosuccinate in water by LC/MS/MS was carried out using CRL Regional Analytical Method for Dioctyl Sulfosuccinate (RAM-DOSS, CAS 577-11-7) in Sea Water by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). None of the sample results were above the DOSS detection verification level (6 ppb) or the reporting level (20 ppb).

Many of the samples were observed with a notable cloudy yellow color.

DOSS is surface active. The surface activity results in DOSS adhering to many materials. Sampling techniques that expose samples to materials other than the sample container may reduce DOSS concentration in samples. Sampling techniques such as peristaltic pumping expose the sample to large surface areas compared to sample volume. DOSS association with peristaltic tubing materials likely results in low biased DOSS concentrations.

Quality Control

B100889-MS2 and B100889-MSD2 DOSS recoveries were below the 50% recovery limit and qualified biased low (L) as well as 1008042-07. The low DOSS recoveries from 1008042-07 coincide with the low DOSS-D34 recoveries. The B100889-DUP2, B100889-MS2 and B100889-MSD2 DOSS-D34 recoveries were below the 50% recovery limit and qualified biased low (L) as well as 1008042-07. The 1008042-04, -05, -06 and -07 DOSS-D34 recoveries were below the 50% recovery limit therefore the DOSS and DOSS-D34 results for these samples were qualified biased low (L). The low surrogate recoveries indicate notable matrix effect on analyte response.



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All quality control criteria not mentioned met acceptance limits stated in the method.



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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T001-0059-100822-SW-15-1	1008042-01	Water	Aug-22-10 09:45	Aug-24-10 08:30
T001-0060-100822-SW-12-1	1008042-02	Water	Aug-22-10 11:40	Aug-24-10 08:30
T001-0060-100822-SW-22-1	1008042-03	Water	Aug-22-10 11:15	Aug-24-10 08:30
T001-0062-100821-SW-12-1	1008042-04	Water	Aug-21-10 12:15	Aug-24-10 08:30
T001-0062-100821-SW-22-1	1008042-05	Water	Aug-21-10 11:45	Aug-24-10 08:30
T001-0059-100822-SW-30-1	1008042-06	Water	Aug-22-10 09:20	Aug-24-10 08:30
T001-0061-100821-SW-07-1	1008042-07	Water	Aug-21-10 09:45	Aug-24-10 08:30



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Analysis by LC MS MS

US EPA Region 5 Chicago Regional Laboratory

T001-0059-100822-SW-15-1 (1008042-01) Water Sampled: Aug-22-10 09:45 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U			20.2	ug/L	1	B100889	Aug-24-10	Aug-24-10

Surrogate: DOSS-D34 111 55.7 % 50-150 " " "

T001-0060-100822-SW-12-1 (1008042-02) Water Sampled: Aug-22-10 11:40 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U			20.1	ug/L	1	B100889	Aug-24-10	Aug-24-10

Surrogate: DOSS-D34 107 54.3 % 50-150 " " "

T001-0060-100822-SW-22-1 (1008042-03) Water Sampled: Aug-22-10 11:15 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U			20.1	ug/L	1	B100889	Aug-24-10	Aug-24-10

Surrogate: DOSS-D34 99.7 52.3 % 50-150 " " "

T001-0062-100821-SW-12-1 (1008042-04) Water Sampled: Aug-21-10 12:15 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U	L		20.5	ug/L	1	B100889	Aug-24-10	Aug-24-10


David Schroeder, Chemist



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T001-0062-100821-SW-12-1 (1008042-04) Water Sampled: Aug-21-10 12:15 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Surrogate: DOSS-D34	27.2			13.6 %		50-150	B100889	Aug-24-10	Aug-24-10

T001-0062-100821-SW-22-1 (1008042-05) Water Sampled: Aug-21-10 11:45 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U	L		20.2	ug/L	1	B100889	Aug-24-10	Aug-24-10

Surrogate: DOSS-D34 66.4 32.9 % 50-150 " " "

T001-0059-100822-SW-30-1 (1008042-06) Water Sampled: Aug-22-10 09:20 Received: Aug-24-10 08:30


Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U	L		19.5	ug/L	1	B100889	Aug-24-10	Aug-24-10

Surrogate: DOSS-D34 93.1 48.9 % 50-150 " " "

T001-0061-100821-SW-07-1 (1008042-07) Water Sampled: Aug-21-10 09:45 Received: Aug-24-10 08:30

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
dioctyl sulfosuccinate	U	L		20.0	ug/L	1	B100889	Aug-24-10	Aug-24-10

Surrogate: DOSS-D34 39.1 19.6 % 50-150 " " "


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Batch B100889 - *** DEFAULT PREP ***

Blank (B100889-BLK1)

Prepared & Analyzed: Aug-24-10

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
dioctyl sulfosuccinate	U			19.7	ug/L						

Surrogate: DOSS-D34 272 " 198.0 138 50-150

LCS (B100889-BS1)

Prepared & Analyzed: Aug-24-10

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
dioctyl sulfosuccinate	171			20.5	ug/L	181.8		94.1	50-150		

Surrogate: DOSS-D34 180 " 181.8 99.0 50-150

LCS Dup (B100889-BSD1)

Prepared & Analyzed: Aug-24-10

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
dioctyl sulfosuccinate	192			19.6	ug/L	202.0		95.1	50-150	11.5	30

Surrogate: DOSS-D34 196 " 202.0 96.8 50-150



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Batch B100889 - *** DEFAULT PREP ***

Duplicate (B100889-DUP1)				Source: 1008042-06				Prepared & Analyzed: Aug-24-10			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
diethyl sulfosuccinate	U			19.7	ug/L		U				200

Surrogate: DOSS-D34 105 " 196.1 53.5 50-150

Duplicate (B100889-DUP2)				Source: 1008042-07				Prepared & Analyzed: Aug-24-10			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
diethyl sulfosuccinate	U	L		19.9	ug/L		U				200

Surrogate: DOSS-D34 42.2 " 189.6 22.2 50-150

Matrix Spike (B100889-MS1)				Source: 1008042-06				Prepared & Analyzed: Aug-24-10			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
diethyl sulfosuccinate	110			19.9	ug/L	193.2	U	57.1	50-150		

Surrogate: DOSS-D34 106 " 193.2 55.0 50-150

Matrix Spike (B100889-MS2)	Source: 1008042-07	Prepared & Analyzed: Aug-24-10
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Batch B100889 - *** DEFAULT PREP ***

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
dioctyl sulfosuccinate	49.9	L		19.9	ug/L	193.2	U	25.8	50-150		
Surrogate: DOSS-D34	49.4				"	193.2		25.6	50-150		

Matrix Spike Dup (B100889-MSD1) Source: 1008042-06 Prepared & Analyzed: Aug-24-10

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
dioctyl sulfosuccinate	107			19.6	ug/L	194.2	U	54.9	50-150	3.42	30
Surrogate: DOSS-D34	103				"	194.2		53.2	50-150		

Matrix Spike Dup (B100889-MSD2) Source: 1008042-07 Prepared & Analyzed: Aug-24-10

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
dioctyl sulfosuccinate	54.0	L		19.7	ug/L	192.3	U	28.1	50-150	7.91	30
Surrogate: DOSS-D34	53.2				"	192.3		27.7	50-150		



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Notes and Definitions

- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- U Not Detected
- NR Not Reported

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified) VERSION 6.05:2003 Special Units: (ug/L)
1008042-04	RAM-DOSS	(Water)	
	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
1008042-04	RAM-DOSS	DOSS-D34	Exceeds lower control limit
1008042-05	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
1008042-05	RAM-DOSS	DOSS-D34	Exceeds lower control limit
1008042-06	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
1008042-06	RAM-DOSS	DOSS-D34	Exceeds lower control limit
1008042-07	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
1008042-07	RAM-DOSS	DOSS-D34	Exceeds lower control limit
B100889-DUP2	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
B100889-DUP2	RAM-DOSS	DOSS-D34	Exceeds lower control limit
B100889-MS2	RAM-DOSS	dioctyl sulfosuccinate	Exceeds lower control limit
B100889-MS2	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
B100889-MS2	RAM-DOSS	DOSS-D34	Exceeds lower control limit
B100889-MSD2	RAM-DOSS	dioctyl sulfosuccinate	Exceeds lower control limit
B100889-MSD2	RAM-DOSS	dioctyl sulfosuccinate	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
B100889-MSD2	RAM-DOSS	DOSS-D34	Exceeds lower control limit